

Mobile information literacy and public access in the era of post-truth: reflections from community curricular experiences in Latin America.

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Abstract

Millions of people in the Global South are coming online predominantly via mobile. At the same time, disinformation and data privacy and security issues are threatening the public sphere. The need for mobile-centred information literacy (MIL) initiatives to counter these risks is pressing, especially for socio-economically underserved communities. This chapter focuses on how Community Technology Centres (CTCs) in Latin America are engaging with MIL. Results show that CTCs are offering mobile-related educational activities as isolated initiatives, but no common regional or national MIL curriculum is in place. We conclude by claiming that CTCs need to be supported with more comprehensive MIL curricula, to be able to promote well-being and active citizenship in their communities.

Concerns for a predominantly mobile access

Millions of people, especially in developing countries or within lower income communities, are coming online predominantly via mobile. The poorer people are more likely to be smartphone-dependent, even when mobile devices are not their first technology to access the internet (Pew Research Center, 2019). Development practitioners, advocates of the freedom of the net, scholars and the broader society have been vocal about their concerns related to this smartphone dependency (Shahbaz, 2018).

Mobile technologies have very specific affordances, which influence the way people can access and produce information, and which carry privacy and security implications. Specific smartphone information behaviours include, for example, searching information through apps versus a browser. Apps may filter information for the user in less transparent manner, and leave the user less free to look for more and different search results – the so called “walled garden” (Clark, Coward, & Rothschild, 2017). Clark and colleagues also claim that accessing the internet via mobile devices would shift information behaviours towards information consumption rather than production, towards a stronger focus on social activities

over productivity, and towards searching information in more situated but less rigorous ways (Clark et al., 2017).

Mobile-predominant access might also influence the way people conceptualize the internet itself: “Frequently, mobile users believe a single app or social media platform is the extent of access. As a result, these platforms possess monopolies of the imagination – the ability to shape and control users’ perceptions of the Web. People end up viewing the Web less as a life-changing resource, and more like a television” (Surman, 2015). Millions of Facebook users, especially in developing countries, think that Facebook *is* the Internet (Mirani, 2015; Vaidhyanathan, 2018).

These facts have potentially disastrous consequences, especially in a world where digital literacy is still one of the main barriers to bridge the digital divide, where disinformation has been used to shift and divide the public discourse, and where concerns related to data privacy are impacting the public discourse (Briant, 2018; Coward, 2018). While people are increasingly more vulnerable to surveillance (Briant, 2018) and more likely to be caught into social media “filter bubbles” and “echo chambers” of information and misinformation (Arif et al., 2016; Starbird, 2017; Vaidhyanathan, 2018), the global internet freedom has reportedly been declining since 2010 (Shahbaz, 2018).

A smartphone-centric access to the internet in a still digitally illiterate world might have dangerous consequences (Nemer, 2019; Vaidhyanathan, 2018). This is especially true for people who are socio-economically marginalized, who have the least resources and ability to discriminate information and to choose whether to provide their personal data or not thus are more likely to be coerced into it (Marwick & Boyd, 2018; Vannini et al., 2019).

Mobile information literacy: a definition

Digital Literacy is frequently mentioned as the way forward to counter disinformation and protect people’s privacy (Clark et al., 2017; Shahbaz, 2018; Vaidhyanathan, 2018; Vannini et al., 2019). While many digital literacy curricula have been developed over the years, there is a scarcity – with a few exceptions – of curricula that address the issues related to mobile information literacy (MIL), even more for mobile-only users (Day, 2015). Available mobile courses and curricula in the literature are based on a few case studies, and they are mainly limited to show the use of the device – neglecting tackling proper information literacy via the devices (e.g.: Jisc, 2014; GSMA, 2015). On the other hand, the need for MIL-specific experiences has been called for, as using a smartphone requires not only different operational skills, but also specific informational skills (see: Clark et al., 2017; Coward, 2018; GSMA, 2014, 2016).

Two concepts are at the basis of the notion of “mobile information literacy”:

- *Information Literacy*, defined as a set of abilities requiring individuals to locate, evaluate, select, store, and use effectively and ethically the information they need, understand traditional and new information sources, interpret information in different formats, discriminate information and

knowledge, assess and articulate information need (Ala-Mutka, 2011; American Library Association, 1989).

- *Digital Literacy*, defined as the ability, knowledge, skills, and behaviours to find, evaluate, make informed judgments, utilize, manage, share, and create information and content, using a broad range of Information and Communication Technologies (ICTs), benefit from them for personal life tasks and objectives, and understand the value of traditional tools and resources in conjunction with the digital (Ala-Mutka, 2011).

“*Mobile Information Literacy*” is, then, defined as a set of abilities required to “find and evaluate the quality and credibility of information obtained online and understand how to create and share online information effectively, and participate safely and securely” (Day, 2015, p. 5) when using mobile technologies, and not PC, environments. MIL must ensure that the so-called “next billion” (of people who will be able to access to the Internet) will have a relevant, meaningful, participatory, free and secure access to the Internet.

Two MIL curricula are currently known to the authors:

- Associazione SEED developed a project to familiarize Indian children with ICTs by using tablets instead of computers, leveraging on project-based, problem-solving, collaborative learning and edutainment software (Associazione SEED, 2015; ST Foundation, 2015).
- The TASCHA Group at the University of Washington developed a Mobile Information Literacy Curriculum addressing not only skills, but also concepts and attitudes for two specific contexts of intervention: in Myanmar and Namibia (Day, 2015).

Mobile information literacy and CTCs

CTCs are designated and privileged actors in providing digital literacy skills and ICTs training to disadvantaged populations, thus bridging the digital divide and contributing to the well-being of such populations. Physical places are still an important component of access to ICTs – and training in their use – for marginalized populations (Best, Thakur, & Kolko, 2010; Kleine, 2013; Parkinson & Lauzon, 2008; Peña-López, 2013). People often go to CTCs even if they have access through mobile technologies or via PC at home, as they value social and peer learning versus individual access (Bar et al., 2013; Gómez, 2011; Rega, 2019; Sey et al., 2013; Vannini, Rega, Sala, & Cantoni, 2013). The popularity of innovation hubs confirms the key value of physical venues in ICTs education, innovation and entrepreneurship (European Network of Living Labs, 2014; Friederici, 2014; Jimenez & Zheng, 2018).

CTCs’ role to help communities develop digital skills is renowned (Bar et al., 2013; Gomez, Ambikar, & Coward, 2009; Sey et al., 2013; Sey & Fellows, 2009). However, as shown by the literature, experiences related to mobile literacy are still at an initial stage, and there are no standard and widely adopted digital literacy curricula based on mobile technologies. Thus the relevance of understanding whether CTCs are innovating their activities by creating and adopting MIL curricula, and whether they share MIL best

practices to MIL curricula beyond CTCs. To do so, this study focuses on Latin American CTCs and asks the following questions:

- What MIL curricular practices are CTCs in Latin America adopting?
 - a. Are they creating innovative MIL services?
 - b. Do they share common MIL curricula or best practices?
 - c. How are they preparing their communities to face the era of disinformation?

Latin American CTCs and mobile information literacy

This chapter focuses on Latin American CTCs, especially in Brazil, Chile, and Colombia, and presents an overview of the different ways they engage with MIL activities. We surveyed and interviewed operators of Latin American CTCs, defined as managers and other executive staff members of the venues, (see Vannini, Nemer, & Rega, 2017 for further details), mainly working in areas considered at partial or high risk of violence and criminality. Their public varied both among and within CTCs, but included the most vulnerable sectors of the population: young people and children, housewives, and the elderly. Only in a few cases, CTCs were collaborating with small enterprises in the areas, to help them with their capacity building.

Overall, CTCs are starting to offer mobile-related initiatives, many of which are related to education. CTCs' operators showed they perceive mobile technologies as tools to achieve CTCs' community development goals, particularly as used for communication and community building. They also indicated that they see a greater role for mobile technologies in education to support CTCs' goals. Indeed, CTCs engage in MIL activities. Outcomes from our interviews distinguished five different ways in which MIL is addressed.

Introduction to mobile technologies

All interviewees mentioned helping community members with getting through the most basic functions of mobile technologies in one way or another, according to the context and needs of the community. Activities included: understanding mobile plans, use and consumption of data, configuring the device, installing mobile applications, creating an email address and a social media account, making video-calls using different applications. They often also tackle mobile content creation (e.g.: taking pictures, accessing and using Google Docs), and content sharing (e.g. via WhatsApp, Social Media, Bluetooth). Finally, they often teach how to download and store content on the devices and on the cloud.

Furthermore, operators often explicitly mentioned advocating for a meaningful use of the technology:

This context preaches that technology is the goal and not the means. Owning a mobile is important, but for what? [...] It will always be relevant to teach people what technology is for and how it can improve their quality of life, for example. (Colombia, Participant 15)

A context-relevant meaningful use

The context and needs of the community were always operators' main focus. They mentioned several examples of services they had specifically adapted. These encompass a range of activities, from the use of famous apps like Duolingo to teach English to both young people and adults, to ad-hoc activities; these can be framed as examples of situated learning, that proved to be very effective, especially in adult education (Street, 2002). A couple of operators working with housewives mentioned, for example, teaching how to use mobile devices to learn new sewing techniques:

So we were delivering [content] about anything that could generate income to people, starting from their daily work. So we showed them some applications that they could access from their tablets and mobile phones. (Colombia, Participant 2)

Another operator from Colombia mentioned teaching at-risk youth how to mix music and create their own tracks, by using mainly cell-phones, tablets and a loudspeaker:

Well, in my work experience, I worked at a disco [...] so with this program that I was using, VirtualDJ, I sat down with the young people, and this is a community that is very "salsera" [...] there is a lot of "salsa choque" and "reggaetón" here. So I tell them "c'mon, guys come here and mix your own, mix songs" [...] "How does it sound? What is a beat?" [...] So I saw this possibility and I implemented it [...] because here it is very common that the youngsters go in the street with speakers listening to music [...] so I participated in the project of a video [...] and it is street music, it is "salsa choque", but it is their own! They said "Hear this song? This song plays in a disco". And they are happy to know that they did something, that it is their own. (Colombia, Participant 1)

Mobiles and computers: parts of the same ecosystem

At times, interviewees could not separate their mobile-related learning activities from computer-related ones. Some operators mentioned the need to address mobile-related topics during computer classes.

Others address the topic when users can bring their own devices along:

At times we ask them [...] "Can you bring a phone tomorrow?", and [if] they say yes, the course will be focused on mobile, but if they say no, then we will work accessing through a computer. (Colombia, Participant 13)

A few operators declared using CTCs-owned tablets to increase the number of participants to their classes, which would otherwise be limited by their few desktop computers. Others use them to attract a different kind of public, like the elderly and people with lower literacy levels. Operators' approach to teaching to adults and elderly people involves saying that smartphones and computers are "the same thing" (Colombia, Participant 1), especially relative to performing tasks as sending emails and access basic information:

One of my students, both she and her children they have a mobile phone, they don't have a computer at home, they use their phones and they use the computer from the [CTC], so

she has a job at the church and she wanted to reply to some emails, send some reports, and it was very interesting because she learned how to write an email. I told her, “it is the same thing as the computer” [...] only a question of having more agility with your hands because [...] it is touch screen, but the basis is the same, the email appears on your phone, you can attach from your images, select the image, or from your documents. (Brazil, Participant 4)

Finally, a few operators mentioned they believe computers will eventually be dismissed in favour of smartphones, which seems to point to a linear perception of technology development:

Now everything is on [smartphones], so they are never going to disappear, they are just going to improve their quality, their content [...]. So this is what we say to people, computers per se are going to end, something better will come out. Technology improves, so we are leaving computers on the side and we are starting to use mobile devices. (Colombia, Participant 10)

Mobile information literacy practices

While situated learning MIL practices were widely reported, privacy and security teaching was limited to a few basic behaviours, e.g. advising children not to share their personal information on social networks:

We are focusing especially on social networks, because – as you know – the majority of children, even if they shouldn't, they have access to Facebook [...] we focus especially on Gmail, on shared photos, on security, [we recommend not to] share addresses, where they live [...] with school kids we focus especially on privacy. (Colombia, Participant 11)

The recommendation is directed to adults as well, who are pressed to check on their children:

With the parents we worked on that they check on what their children are doing on their phones, we taught them ways to watch them [...] inside the same social network... for example, who are their friends, that they check on their conversations weekly... but that they do not forbid them to be on the sites. [...] we are trying to send the message based on what happens in real life. (Colombia, Participant 10)

And to examine their own behaviour:

It is an issue of raising their awareness since they are young [...]. The same with the adults [...] often they do not know the risks because they also make mistakes, and they do not realize that a photo of them naked... this is the internet and then there is nothing to do... (Colombia, Participant 5)

Operators also want to make sure that users' data is saved in the cloud, perceived as safer than a device:

Safe use of mobiles, for example, we teach users to take advantage of their phones but in a secure way [...] because we can use a phone, but we only save in its internal and external memory, and if we lose it, anyone can access that information. Whereas if we manage the information from [...] the cloud, other can access but not as easily (Colombia, Participant 13)

Operators' work on security also includes preventing cyberbullying:

Last year we worked a lot on cyberbullying and all that has to do with violence on social networks. (Colombia, Participant 13)

It is usually the first class when I explain the rules of the lab, the issues for their security, like on Facebook, of sharing their personal photos, the issue of bullying, of writing [something] on WhatsApp or on Facebook... and this is a class or half a class that focuses on this and its consequences. [...] It is the only moment when we have this kind of discussion. (Chile, Participant 6)

Besides issues of privacy and security, operators stress that a meaningful use of the technology is necessary and important for their communities.

With smartphones, today, as incredible as it may seem, people ask what the internet is and people say "Facebook" (laughing). [...] With the ease that smartphones bring, people got used to this use, many times they don't even look for other information... they are very attached to social media. This is one of the things that we worry about, that the informational world is very vast and people are very limited with social networks. (Brazil, Participant 9)

However, they mostly do not seem to address issues of information quality evaluation through MDs:

We do information literacy, which is how to train users in the search for information by using the necessary sources... this activity is fundamental with young people, but we do not have a specific activity to help them differentiate [it among the] the different technologies. (Colombia, Participant 3)

Curriculum design

The design of curricular activities related to MIL and mobile education, seems to be mostly entrusted to the single CTCs. CTCs usually read the needs of the community and have different ways to respond to them. Sometimes, operators have to be rather spontaneous:

As [they ask] me "what is WhatsApp, how can I open a PDF, how can I make my WhatsApp private so people don't see my profile picture" ... I sit down with them and explain to them. (Colombia, Participant 8)

These spontaneous, almost improvised activities leave little space for the operator to tackle the different nuances related to privacy and security, as well as other information literacy issues. Other times entire curricula are created in a more structured way, in response to community's feedback:

If various users arrive with the same doubt at a certain time, we put them together so that we have to open a training process on that topic, because that is the topic that is of community's concern. And according to the needs that we see up to when we design our working plan, we keep those into account. Still, at any moment a user can come with a specific doubt and we try to offer them a solution. (Colombia, Participant 3)

Among the three countries where our interviewees worked, only in Colombia are ministerial and government directives produced and used to develop curricular materials:

There are materials that are created by the Ministry of Culture or by the Ministry of Information and Communication Technology in Colombia [...]. They don't really tell us to use it, what they do is that they create guides and share them online and they let us know that they are there. If a specific unit reckons that it is useful for them, they use it. (Colombia, Participant 5)

However, there don't seem to be established practices for sharing curricula among CTCs once they are created. Only in one case operators mentioned creating a database:

But there is nothing that is done... this at the level of Colombia. Yet here in [city name] there is a system that exists only in this city, among us we have content that are generalized, and we are creating guides, and over the years, other [CTCs] can take what [another one] has done and replicate it in their community, not starting from scratch, but starting with something that was tried in another place and adjust it to their necessities. (Colombia, Participant 5)

Discussion and conclusions

Millions of people are coming online – primarily via smartphone – in an era of post-truth, thus exacerbating issues related to information authenticity and data privacy and security. Communities at the margins are the most likely to lack the skills and resources to choose whether to disclose their personal data, as well as to be able to discriminate information quality. Mobile information literacy activities have been identified (and called for) as one of the most effective ways to counter these issues. However, MIL-specific curricula are presently lacking.

CTCs play a major role in underserved communities, historically providing them with digital literacy skills training and ICTs access. This study focused on Latin American CTCs to understand whether and how MIL activities are included into their activities, and to uncover possible best practices for more widely adopted MIL curriculum.

Outcomes show that, while mobile literacy services are numerous within CTCs in the region, they are only partial experiences. Also, no common frameworks that comprehensively encompasses MIL topics exists. CTCs' MIL experiences are mainly limited to explaining basic functionalities of mobile devices. Users are taught to change their privacy setting, to not share personal information online, and where to save their data. However, no distinction is made between personal behaviours affecting privacy, and issues related to companies' privacy policies – focusing on how personal information published online can be accessed by governments and private companies. Also, while users are taught how to create and share content via mobile, no mention was made about copyrights, credits and credibility of content creation and sharing.

Operators did not consider issues regarding limitations of accessing information via mobile, such as comparing accessing the internet through apps versus a browser or search engines, as well as evaluating information quality and authenticity and the propensity of social networks to create information echo-chambers. Their inclination, in some cases, to point out the affinity of mobile devices to computers, without considering in depth the different ways they allow access to information, would not help reflecting about the particular limitations mobile devices pose in this sense. Finally, the nature of their work, often requiring to help users unexpectedly and on very specific issues with their devices, does not leave them space and time to tackle these MIL-relevant topics – even more in the absence of a MIL shared curricular framework they can operate in.

Nevertheless, our study shed light on a series of MIL educational initiatives operators are practicing in their communities. The way CTCs are responding to their communities' needs and feedback, and the way that technology is portrayed as an instrument that needs to have a relevant meaningful use was highly stressed by all operators. Many of initiatives they recounted might constitute relevant lessons learnt for the mobile-for-learning and mobile-for-development scholarly community to craft contextually relevant initiatives.

CTCs in Latin America showed a great potential to develop MIL curricula to respond to the needs of their communities. However, the work is mostly carried over on individual initiatives, and is still insufficient to respond to the challenges posed by the current mobile-centric post-truth era. We call policy makers, scholars and practitioners in the field to support CTCs' design and sharing of more comprehensive MIL curricula, so to contribute to the meaningful well-being of underserved communities, as well as the broader society.

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